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remarkable circumstance suggests the following question. Is this behaviour common also to the corresponding compounds of arsenic, phosphorus and nitrogen, and can the position of each of the five atoms with which these elements respectively combine be occupied indifferently by an electro-negative or an electro-positive element? This question, so important for the advance of our knowledge of the organic bases and their congeners, cannot now long remain unanswered.

5. "On the Dentate Body of the Cerebellum." By William Brinton, M.D. Communicated by R. B. Todd, M.D., F.R.S. &c. Received May 23, 1852.

The corpus dentatum has generally been described and recognised as a wavy line or lamina of grey matter, which is seen in certain sections of the crus of the cerebellum, and contains fibres apparently derived from the restiform body, and the processus e cerebello ad testes. Reil's account, with some vague and conflicting details, gives it a more definitely tubular form, although he is apparently not certain of the continuity of its upper and lower layers posteriorly.

The author explains these somewhat varying descriptions by the physical characters of the tissues investigated, and by the condition—fresh or hardened in spirit—of the specimens examined by different anatomists.

He deduces the form and situation of the recent corpus dentatum by uniting numerous and successive sections made in the three directions of space*. Its arrangement with respect to the fibres of the cerebellum, cerebrum, medulla oblongata, and medulla spinalis, is chiefly deduced from examinations of specimens hardened in alcohol.

By these two methods he is led to the following conclusions, that each corpus dentatum forms a tubular investment to the extremity of the processus e cerebello ad testem; it is open towards the fourth ventricle, and is connected with the opposite body by a commissure of grey matter in its median line. While its interior exclusively receives the fibres of this cerebro-cerebellar peduncle, its exterior radiates fibres to the various lobes of the cerebellum, which fibres, at the bottom of each lobe-stem, become inseparably mixed with a bundle from the restiform body, and with another from the pons varolii.

Its *comparative anatomy* in mammalia corresponds with this view; its *minute anatomy* does not contradict it. And while the *physiological import* of this arrangement eludes all conjecture, the author has little doubt that its anatomical structure and relations are best comprehended in the formula which he would thus assign to it, viz. that of being the cerebro-cerebellar ganglion.

6. "Proof of a sensible difference between the Mercurial and Air-Thermometers from 0° to 100° C." By J. J. Waterston, Esq.

* Diagrams to this effect accompanied the paper.